DOCUMENT RESUME

ED 161 077 CS 204 472

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TITLE	Miscue Analysis: The Writing of Three Hispanic American Students in a Class of Twenty Fourth Graders.
INSTITUTION	Arizona State Univ., Tempe.
SPONS AGENCY	National Council of Teachers of English, Urbana, Ill. Research Foundation.
PUB DATE	[77]
NOTE	25p.; For related documents, see CS004443 and CS204472-475
EDRS PRICE	MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS	Elementary Education; Grade 4; Intermediate Grades; *Language Research; *Mexican Americans; *Miscue Analysis; *Sentence Combining; *Writing Skills
IDENTIFIERS	*Writing Miscues

ABSTRACT

Writing miscues of three Hispanic children were compared to those of their classmates in this study. Miscues were obtained through samples of writing taken from difficult sentence combining exercises. Results of the comparison suggested that the Hispanic American children did not make writing miscues that were qualitatively different from those of the other students in the predominantly non-Hispanic class. Examples of miscues made by all students are included. (MKM)

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Miscue Analysis: The Writing of Three Hispanic American Students in a Class of Twenty Fourth Graders

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Following the procedures used by Goodman (1973) for the elicitation of miscues in reading, a project was designed for the elicitation of miscues in writing from fourth grade students at Evans school in Tempe during the spring of 1976. In particular, it would seem that the success of the Goodman procedure relies largely on the ability of the examiner to anticipate the reading level of the experimental subjects and have them read some passage that is slightly difficult for them. In addition, many of the reading passages have unusual features in them which surprise the students into producing miscues. For instance, one reading passage has the name Sven in it; many students choose the closest English name that they know, Steven, and substitute it, thus producing a miscue.

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So it is that, in the spring of 1976 one group of fourth graders were required to perform exercises in writing slightly above their expected ability. In the day to day collection of miscues, writing samples were collected from a project in sentence combining using the procedures developed in previous projects (Ney, 1975 and Burruel, Gomez and Ney, 1974). This procedure centered on a three step process for the conduct of the daily sessions:

1. Establishment of context for language exercises through oral reading of a literary selection.
2. Oral practice of sentence types using language from literary selection in step (1).
3. Writing of selected sentences practiced in step (2).

(The schedule of sentence types practiced in the project can be seen in Table 1; with few exceptions, sentences of these types occur very infrequently in the writing of fourth graders. (See Hunt, 1965.)) One deviation from the preceding experiments was made in the presentation of the exercises for written work. Normally, in previous projects, only sentences of a given syntactic type were practiced either orally or in writing at a given session. Since one of the aims of the project reported here was to gather miscues, one slight variation in the daily procedure was employed to engender miscues in the student writing. This variation required that, in every ten sentences which were practiced orally (three of which were later written), one

sentence deviated slightly in structure from the remainder of the sentences. Those sentences which followed the expected pattern of the day were designated the paradigmatic sentences; the one which did not was designated the contra paradigmatic sentence. Thus, for example, the students might be practicing object to object embedding of sentences with relative clauses as in sentence (1). In the middle of the exercise, or at some other propitious point, a contra-paradigmatic sentence would be inserted such as sentence (2), in this case, a sentence which requires object to subject embedding.

1.	He met a young man.	Cue sentence (1).
	He spoke to the young man.	Cue sentence (2).
	He met a young man whom he spoke to.	On-cue sentence.
2.	The man was handsome.	Cue sentence (1).
	He liked the man.	Cue sentence (2).
	The man whom he liked was handsome.	On-cue sentence

In the exercise including the above examples, at most four students out of nineteen miscued on the paradigmatic sentence. All of the students miscued on the contra-paradigmatic sentence producing the following resultant sentences.

3.	The man was handsome whom he liked.	(12 students)
4.	He liked the man who was handsome.	(4 students)
5.	He liked the handsome young man.	(1 student)
6.	The man who was handsome he liked.	(2 students)

Now, it is apparent from the miscue sentences in (3) through (6) that not all of the sentences thus formed are ungrammatical. Nevertheless these are all treated as miscues in an attempt to determine if in fact some students process oral language into written language in a discernible manner.

Since miscues such as the above are an artifact of the manner in which they are gathered, these are designated as artifactual miscues. Not all of the miscues, however, are of this nature. Some of the miscues seem to be a result of the manner in which students process language when they write down oral language. (For a discussion of student processing of oral language into written language, see Ney (1974).) Miscues of this nature are designated processing errors such as the one in sentence (7).

7. Plagued by arthritis couldn't walk home.

(Plagued by arthritis, the old man couldn't walk home.)

Here, it is supposed that for an instant the student held the noun phrase subject, the old man, in mind but as the sentence was being processed the subject noun phrase was dropped from mind before it could be recorded on paper. (See Mellon, 1969, p. 24.) Still other miscues are a result of the student's stage of linguistic development such as the miscue in sentence (8).

8. The money was safe, kepted in the bank.

(The money was safe, kept in the bank.)

In addition to these, all of the spelling miscues were collected to see if in fact the type of miscues that a student makes in spelling has any relationship to any of the miscues made in other aspects of the students' writing.

After each session, the miscues were recorded for punching on IBM cards. A concordance routine with counter and frequency subroutines was then employed to (1) bring the work of individual students together, (2) compute the frequency of words involving miscues, and (3) group all spelling miscues. In all, over 900 sentences out of an estimated 3600 sentences contained miscues involving 6784 words with miscues. Spelling miscues were for the most part counted singularly and not in a full sentence.

Discussion of the miscues

In the first place, it might be pointed out that making a distinction between artifactual, processing and developmental miscues is difficult because the linguistic capability of ten-year-olds is not known completely. It could be argued that structures not found in the Hunt study (1965) and miscues involving them must in fact be due to the linguistic development of the students and must therefore be developmental miscues. This is not necessarily the case. Hunt, for instance, does not find series of three adjectives or conjoined adjectives in the noun phrases of the writing of fourth graders. In a previous study, Ney (1975), it was reported that fourth graders were not developmentally ready for conjoined adjectives. In

the studies underlying that report, adjectives in series were always introduced before the conjoined adjectives. In the study underlying this report, conjoined adjectives were introduced before adjectives in series with the result that students had little trouble with the conjoined adjectives, but when they were required to produce adjectives in series, they miscued, producing conjoined adjectives instead. Thus, what appeared to be a developmental miscue turned out to be an artifactual miscue, an artifact of the method used to elicit the written language which was subsequently studied.

In spite of this difficulty, an attempt was made to classify miscues into artifactual, processing and developmental miscues. Thus all of the instances of the omission of the past tense marker -ed were classified as developmental as were the uses of whom for who or who for which. After studying them closely, it was decided that all of the pleonastic uses of forms were artifactual as were the various inversions. In a similar manner, it was decided that all of the omission-of-forms miscued were processing errors. With this breakdown, processing errors constituted 49.7 % of the total, artifactual 30.6 % of the miscues and developmental miscues accounted for 19.6 % of the total of the miscues that could be so categorized. All other miscues were assigned to a miscellaneous category.

On the belief that there might be some relationship between the manner in which students process letters in the spelling of

words and the manner in which they process linguistic units on other levels, a detailed analysis was made of spelling miscues in the following fashion: (1) spelling miscues were separated into the miscues of metathesizers and all other miscues. Metathesizer miscues were grouped into four catagories: (i) vowel left, consonant right: e.g. barve 'brave'; (ii) vowel right - consonant left, nosiy 'noisy'; (iii) vowel metathesis, biult 'built'; consonant methatesis, caml 'calm'. As a whole, metathesis miscues in spelling are not very common; they can nevertheless be seen tabulated in Table II.

Table II: Metathesis in Spelling Miscues

Vowel left Consonant right	Vowel right Consonant left	Vowel	Consonant	Total
7	18	28	10	63

All other spelling miscues were divided into three categories: additions, omissions and substitutions. Each of these were further divided into two categories for their involvement with either vowels or consonants in the following fashion: (i) additions - vowels, changeing, 'changing'; (ii) additions - consonants, whithe, "white'; (iii) omissions - vowels, becuse, 'because'; (iv) omissions, consonants, straigh 'straight'; (v) substitutions - vowels, surved, 'served'

(vi) substitutions - consonants, death, 'deaf'. In this type of analysis, some items would have more than one miscue, for example, ocsen, 'ocean,' has one consonant addition involving the 's' and one vowel omission involving the 'a'. (Here, vowel should be understood as vowel letter and consonant as consonant letter.) In this analysis, the spelling miscues involving addition, omission and substitution of letters are as follows: (See Table III).

Table III: Additions, Omissions and Substitutions in Spelling Miscues

Vowels	Consonants	Vowels	Consonants	Vowels	Consonants	Total
Boys						
15	18	38	54	33	33	191
Girls						
27	23	40	49	31	34	204
Hispanic Americans						
3	5	3	9	5	3	28
Avg. Boys						
1.9	2.3	4.8	6.2	2.4	2.4	3.3
Avg. Girls						
1.9	1.6	2.9	3.5	2.2	2.4	2.4
Avg. Hispanic Americans						
1	1.7	1	3	1.7	1	1.6

For boys, n = 8; for girls, n = 14; for Hispanic Americans, n = 3 (1 boy; 2 girls).

The above analysis forces neglect of some interesting facts about miscues in spelling; for instance, when a student uses witch for which or bear for bare, that student is selecting spellings on the basis of underlying homphonous forms resulting in the choice of the wrong graphic representation. This fact is obscured by the above analysis but, on the other hand, it is interesting to note that the 8 boys in this were not as good spellers as the 14 girls and that the 3 Hispanic Americans were the best spellers of the three groups. (Part of this is undoubtedly due to the fact that the Hispanic American group is so small; there were individual boys and girls who had perfect spelling records and these students were not in the Hispanic American group.)

All other miscues in the writing of the students can be grouped into omissions, pleonasms and substitutions. It should be understood that this kind of grouping does not exclude process statements which are so popular in linguistic studies today. An omission can be the failure to use a particular transformation and a substitution can be the use of one transformation in place of another. In any case, it is interesting to note that, of the miscues involving omission of members

of a particular part of speech or of a phrase, the omissions of nouns or noun phrases are the most frequent. This becomes apparent from a perusal of Table IV.

Table IV: Miscues Involving Omission of Members of a Particular Part of Speech or of a Phrase

Noun or Noun Phrases	Verbs or Verb Phrases	Adj-ectives	Adverbs	Prep-ositions	Conjunc-tions	Determiners
Hispanic Americans						
13	12	13	6	8	7	20
All other Students						
68	6	3	1	3	1	4

In the above table (Table IV), it is apparent that nouns, noun phrases and determiners are more frequently omitted from written language processed from oral input than members of any other form class. Elsewhere, (Ney and Leyba 1977), it has been argued that the high incidence of omission of members of these form classes give some indication of the correctness of a Filmorean-type case grammar. But here it is sufficient to notice that only in the omission of the verbs do the Hispanic Americans become involved in a greater proportion of omissions than their peers (2 to .54), and it should also be noted that all but one of these involves the omission of the auxiliary.

In any case, the environments in which miscues involving

the omission of nouns and noun phrases occurred are interesting. For instance, all cases of the omission of an entire noun phrase occurred in the processing of sentences which resulted in miscues such as those in (9) and (10).

9. Frightened by the thief, _____ ran home. (10)
   Frightened by _____, the boy ran home. (1)
   (Frightened by the thief, the boy ran home.)
10. Running away _____ didn't look back. (3)
   (Running away, the cat didn't look back.)

None of the Hispanic American students made miscues of this nature with these sentences, but since the population is so small (n=3), it is unwise to attach any significance to this.

It is also interesting that out of 39 instances in which the noun alone is missing 19 occur directly following the definite article as in (11) and 14 occur directly after adjectives as in (12).

11.i The which was now dead has been mean.
   (The dog which was now dead has been mean.)
  ii The visited the city.
   (The boy visited the city.)
12.i The bright young visited the city.
   (The bright young boy visited the city.)
  ii The boat sailed on stomy and windy.
   (The boat sailed on the stormy and windy ocean.)

(The sentences numbered (ii) in each set are written by one of the two Hispanic Americans.)

The remainder of the instances of the omission of nouns center on the omission of the pronouns (27 instances). These can be divided into the omission of relative pronouns resulting in grammatically well-formed sentences (13) and those resulting in grammatically mal-formed sentences (14) and the omission of personal pronouns (15).

13.i The medicine he put on the scar was very strong.
(The medicine which he put on the scar was very strong.)

14.i The elephant was big and dirty came down the road.
(The elephant which was big and dirty came down the road.)

ii Rip served the chief weatherbeaten.
(Rip served the chief who was weather-beaten.)

15.i The medicine put on was very strong.

ii The medicine which was very strong put on the scar.
(The medicine which he put on the scar was very strong.)

(Again, the sentences numbered (ii) are written by a Hispanic American.)

Of the miscues involving omissions, the next most frequent are the omissions of the determiners which accounted for 24 miscues. Only two of these involved the omission of the indefinite article as in (16) -- a sentence written by a Hispanic American student.

16. The Wolf was strong and brave dog.
(Wolf was a strong and brave dog.)

The remainder of the omissions of determiners involved the omission of the definite determiner, the. Of these only three miscues were caused by the omission of the in a subject noun phrase.

17. Man who prayed a lot got tired.

(The man who prayed a lot got tired.)

(Hispanic Americans produced no miscues of this nature in this environment.) However, most cases of the omission of the in object position are in clearly statable environments such as (a) with the use of gerundive modifiers in prenominal position (18), (b) preceding nouns which in turn are followed by relative clauses (19), or (c) preceding nouns that had conjoined adjectives embedded in prenominal position (20):

18. The rabbit liked quickly thinking coyote.

(The rabbit liked the quickly thinking coyote.)

19. Rip served chief who was weather-beaten.

(Rip served the chief who was weatherbeaten.)

20. The laughed at quiet and considerate man.

(They laughed at the quiet and considerate man.)

The boat sailed on stomy and windy.

(The boat sailed on the stormy and windy ocean.)

(All but one of the instances like (19) were the work of two students.) In any case, it would seem that most of the miscues involving omission of the determiner the occur when students are grappling with material that is structurally complex. The same

can be said of the omission of the indefinite determiner a/an.

21. The man carried heavy keg.

(The man carried a heavy keg.)

22. The wolf was strong and brave dog.

(Wolf was a strong and brave dog.)

(In (22), there is an example of a sentence written by a Hispanic American student.) For all of these cases, it appears that the processing capability of the students was overtaxed and that they miscued, dropping out the determiners. So it is that the miscues involving the omission of nouns, noun phrases and determiners constituted the largest single group of miscues, well over 100. Sixteen instances of the omission of adjectives (23), seven instances of the omission of adverbs (24), eleven instances of the omission of prepositions (25), and eight instances of the omission of conjunctions (26) all account for fewer miscues.

23.i The crowd which was growing became.

(The crowd which was growing became big.)

Rover found the bone wich was big and bare.

(Rover found the bone which was big, white and bare.)

ii He hid under the broken bed.

(He hid under the old, dark and broken bed.)

24.i The village built long has become old.

(The village built long ago had become old.)

When he put his tongue he tasted gravy.

(When he put out his tongue, he tasted gravy.)

ii Running, the cat didn't come back.

(Running away, the cat didn't come back.)

25.i The sentence repeated the boy didn't make sense.

(The sentence repeated by the boy didn't make sense.)

ii The thin man who was speaking elections gave him a handbill.

(The thin man who was speaking about the elections gave him a handbill.)

26.i Bug was a handsome young dog.

(Bug was a handsome and young dog.)

ii The big dirty elephant came down the ride.

(The big and dirty elephant came down the road.)

(The sentences numbered (ii) are written by Hispanic American students.) Similarly, in contrast to the omission of nouns and determiners, the omission of the verb alone or of the entire verb phrase occurred very infrequently, only 18 times in the data under discussion. These involved omission of the verb alone (27) or omission of the entire verb phrase (28).

27.i The man a heavy keg.

(The man carried a heavy keg.)

He into a dark forest.

(He went into a dark forest.)

28.i The girl who was weak thin and sickly.

(The girl who was weak, thin and sickly couldn't move.)

A thin man speaking about elections.

(A thin man speaking about elections gave him a handbill.)

(For this particular miscue, there were no instances in which the three Hispanic American students miscued in the omission of the verb or the verb phrase.)

The omission of the auxiliary and be as a main verb accounted for a total of seven miscues. Two of these were in the writing of an Afro-American student.

29. The suddents divided in Groops which different.

(The students divided into groups which were different.)

One of these was in the writing of a Hispanic American student:

30. Crows who were eating the corn big black and noisy.

(The crows which were eating the corn were big black and noisy.)

The remainder of the instances of the omission of the auxiliary occur in sentences with the passive.

31. The dog which owned by the boy had no name.

(The dog which was owned by the boy had no name.)

Unlike the instances in which members of a particular form class are omitted from written sentences, pleonastic uses of the members of various form classes are rather infrequent accounting for 52 miscues as compared with 185 instances of omissions. The pleonasms involved in miscues, however, indicated as wide a range in type as the omissions. For instance, one of these involved what is commonly considered to be a pleonastic pronoun.

32. The dog he was brave and strong.

Another, written by a Hispanic American student, occurs in the

the object position of a subordinate clause but is not so commonly recognized as a pleonasm.

33. He met a young man whom he spoke to him.
(He met a young man whom he spoke to.)

The kind of miscue exemplified by (33) above also occurred frequently in the writing of non-Hispanic students as in the following:

34. The students had a plan which the plan was dandy.
(The students had a plan which was dandy.)
He loved the dog which he wanted it.
(He loved the dog which he wanted.)
The boy whom won the contest he hated the man.
(The boy who won the contest hated the man.)

All of the above sentences containing miscues (33 and 34) were undoubtedly an artifact of the manner in which the miscues were obtained. Students were grappling with oral input sentences, trying to combine them in their minds and then writing them on paper. Probably in the usual written composition mode, miscues of this type would not occur. But for purposes of this study, the manner in which the writing miscues were obtained is not of central importance. The fact that the Hispanic students process language in much the same way as the monolingual non-Hispanic students is of importance. It shows that both groups of students are processing written English in the same (or similar) fashion.

In any case, of the 52 instances of pleonasm in miscues, 31 of them involve nouns, noun phrases or pronouns as in the above. No verb, verb phrases or adjectives were involved with pleonastic miscues although adverbs were (3 instances) as were conjunctions (7 instances) and prepositions (2 instances) as in the following:

35. The slowly walking slowly chief arivide late.
(The slowly walking chief arrived late.)
The nine pines falling over over sounded like thunder.
(The nine pins falling over sounded like thunder.)

ii The cooked will rabbits tasted will.
(The well cooked rabbits tasted good.)

36.ii The old woman comeing forward studied at his face.
(The old woman, coming forward, studied his face.)

37.i The young and bright boy visited the city.
(The young, bright boy visited the city.)

(All miscues involving conjunctions were of the nature of (37.i); miscues in sentences written by the Hispanic Americans are numbered (ii). Thus, both instances involving the pleonastic use of a pronoun were in sentences written by one of the Hispanic American students.) In any case, it is interesting that, of the miscues involving pleonastic forms, the majority are involved with nouns and noun phrases.

In a rather strange reversal, the most numerous cases of substitutions involve the use of one verb for another although

the total number of miscues thus created is rather small (8 instances).

38.i The snake look at the fast moving rabbit.

(The snake watched the fast moving rabbit.)

Davy didn't think thinking about the raccoon.

(Davy didn't move thinking about the raccoon.)

38.ii They watch and left quiet and considerate.

(They laughed at the man who was quiet and considerate.)

Substitutions of this nature are infreguent; none of them are in the sentences written by the Hispanic American students.

One whole series of miscues deals with the inversion of clauses and other sentence elements. Some students who create miscues by inverting sentence elements produce double inversions, that is, the interchange two sentence elements.

39.i The fast moving rabbit watched the snake.

(The snake watched the fast moving rabbit.)

39.ii The sense repeated by the boy didn't make sentence.

(The sentence repeated by the boy didn't make sense.)

(The sentence numberred (ii) was written by one of the Hispanic American students.) Other students are right embedders, shifting to the right a sentence element which was supposed to be embedded to the left.

40.i Scarface liked the young man who welcomed him.

(The young men whom Scarface liked welcomed him.)

40.ii The man prayed a lot the man who was tired, lonely and overworked.

(The man who was tired, lonely and overworked, prayed a lot.)

The girl couldn't move who was thin and sickly.

(The girl who was thin and sickly.)

(The sentences numbered (ii) were written by two of the three Hispanic American students in the study.) Still other students are left embedders, shifting to the left a sentence element which was supposed to be to the right, sentence final position.

41.i The man who was handsome he liked.

(He liked the man who was handsome.)

41.ii The crows which were eating were big black and noisy.

(The crows which were big, black and noisy were eating the corn.)

(Again, the sentence numbered (ii) is written by a Hispanic American student.) Still other students are dodgers; they prefer not to follow the stated activity of the day, substituting for it some other strategy.

42.i He liked the handsome young man.

(The man whom he liked was handsome.)

42.ii The badly coyote who was limping came along.

(The badly limping coyote came along.)

Now, at this point, it is difficult to classify students as being

exclusively one type of student or another. Most students at one time or another manifest one strategy or another. It is possible that some students may use a single strategy predominantly throughout all their attempts to process written language. In any case, the central thrust of this brief paper has been this: The Hispanic American children in this study do not become involved with writing miscues that are qualitatively different from those of the other students in the predominantly white Anglo Saxon class. Although at points the Hispanic American children did not produce miscues similar to those of other children and at other points the Hispanic American students produced more of a given type of miscue than the other students, yet both of these instances are probably caused by the smallness of the sample. Only three Hispanic students were involved. If a greater number of Hispanic American students had been involved, there is no reason to believe that the miscues of the Hispanic American students and all other students would not be qualitatively and quantitatively similar.

Table 1: Schedule of Sentence Types Practiced

Structure		
Adjectives		
Single	He didn't like difficult work.	1,4
In WH-clauses	...the tree which was large.	3,5,6,11,23
Conjoined		
Prenominal	The tired and hungry man couldn't...	21,23
Postnominal	The man, tired and hungry...	20
In WH-clauses	The man, who was tired and hungry	23
In triple series	He listened to the lonely, tired and unhappy man.	30,31
In WH-clauses	The men, who were blind and poor...	19
In Series	They sat through the long lazy days of summer.	2,26
In WH-clauses		
ING-phrases		
Prenominal	He watched the quietly purring cat.	22,29
Postnominal	The children, running with him, ...	9,12
In WH-clauses	The man, who was entering the...	8
As Sentence Modifier	Running with him, the children entered the village.	10,13
Cumulative	...entered the village, running with him.	14
In WH-Clauses		
EN-Phrases		
Prenominal	...the badly broken foot.	18,29
Postnominal	The village, built long ago...	16
In WH-clauses	The mule, which was owned by...	15
As Sentence Modifier		
Cumulative	The village had become old, built long ago.	17
Non-adjectival clauses		
Object to object	She talked to the man whom she had met.	25
Object to subject	The life which they lived was very long.	27,28

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[1]This research was completed with the aid of a grant from the Research Foundation of The National Council of Teachers of English.